

## Function assay result

### Experiment 1: Function of signal protein YebF

#### Purpose :

Testing if the signal sequence before the coding product can successfully work, bring the protein outside of the cell.

#### [Notice]

Before reading further details, please notice that we have named these circuits with three symbols:

Comp=competent cell

J23100=J23100+B0034+RFP+B0015

J+Y+R+B=J23100+RBS-yebF+RFP+B0015

#### Method :

1. Three E.coli strains is cultured overnight in 15mL LB medium respectively in 15ml centrifuge tube and incubate in 37C overnight.
2. Adjusting all of the culture to an OD value of 0.6, and add 1ml of each into flasks containing 80ml LB.
3. Put all of them into 37C incubator and start the measurement.

#### Measurement:

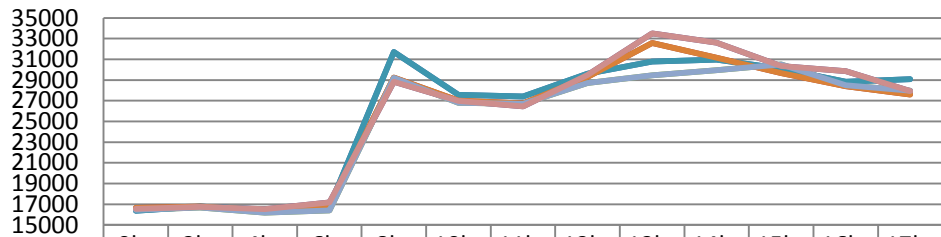
For each sample : LB, competent cell, J23100, and J+Y+R+B,

And do quadruplication for each of them every certain time interval.

#### Result :

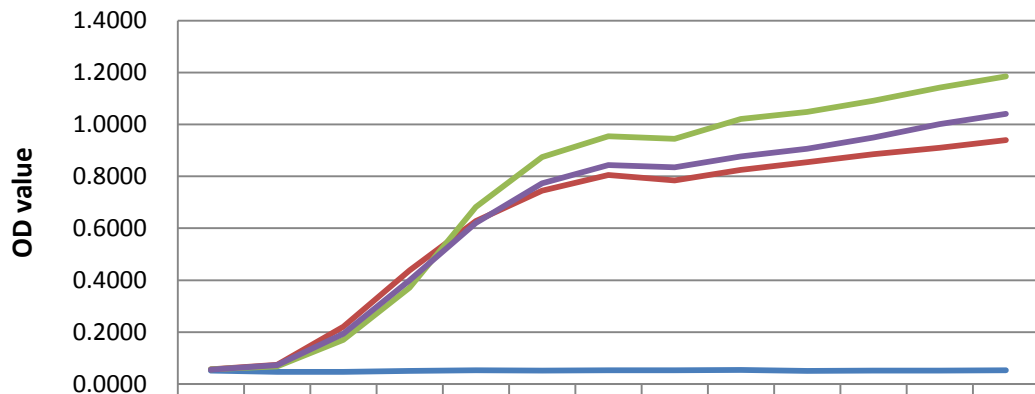
## Fluorescence Intensity of RFP in supernatant

Fluorescent intensity (RFU)



	0hr	2hr	4hr	6hr	8hr	10hr	11hr	12hr	13hr	14hr	15hr	16hr	17hr
LB	16383	16783	16487	16780	31721	27559	27412	29605	30792	30975	30099	28854	29072
Competent	16652	16770	16451	16868	29227	27028	26739	29317	32594	31163	29669	28416	27592
J23100	16471	16700	16178	16396	29198	26808	26718	28729	29469	29937	30503	28502	27963
J+Y+R+B	16567	16742	16520	17173	28848	26969	26470	29473	33351	32624	30365	29869	27956

## growth curve



	0	2	4	6	8	10	11	12	13	14	15	16	17
LB	0.052	0.046	0.047	0.051	0.053	0.052	0.053	0.053	0.054	0.05	0.052	0.051	0.053
Comp	0.056	0.074	0.221	0.437	0.627	0.745	0.805	0.784	0.824	0.854	0.885	0.909	0.939
J23100	0.056	0.068	0.17	0.372	0.682	0.874	0.955	0.945	1.021	1.048	1.092	1.142	1.185
J+Y+R+B	0.056	0.072	0.194	0.399	0.621	0.774	0.844	0.835	0.876	0.906	0.949	1.001	1.04

**J23100+yebF+RFP+B0015**  
**Growth Curve vs Secretion**

